



## The International Programs Section

Issue: December 2014

<http://international.anl.gov>

### What's New?

#### - more opportunities for students -

A U.S. funded internship program has been initiated to introduce young U.S. citizens to the activities of the International Atomic Energy Agency (IAEA), generate more interest in future careers at the IAEA, and develop the skills of future professionals in nuclear fields. Providing these opportunities will enable the International Program (IP) Staff the ability to offer a tangible experience to interested U.S. candidates. This will also assist in attracting more attention to our IAEA Careers program, which offers assistance to U.S. candidates interested in professional posts at the IAEA. The interns will be placed in various departments at the IAEA in Vienna, Austria for a period of 12 months each. The internship placement program will begin in early 2015.

### Oh, the places we've been.

#### - from trade shows to IAEA meetings -

##### August

IAEA Careers @ Isotope Conference (Chicago, IL)

##### September

IAEA Careers @ UW Madison Career Fair (Madison, WI)

IAEA Careers @ USGS Water Science Center (Madison, WI)

IP Program Manager @ IAEA Environment Laboratory (Monaco)  
and @ IAEA (Vienna, Austria)

##### October

IAEA Careers @ SWE Conference (Los Angeles, CA)

IP Program Manager @ Fellowship Meeting (Turin, Italy)

##### November

IAEA Careers @ ANS Winter Meeting (Anaheim, CA)

IAEA Careers @ RSNA Meeting (Chicago, IL)

IP Program Manager @ IAEA (Vienna, Austria)



**Pictured Above:** IP Manager, Dr. Sunaree Hamilton (right), with Contract Sponsor Mr. Michael Foughty (DOS) on the roof top of the IAEA Environmental Laboratories in Monaco.



**Pictured Above:** Dr. Hamilton (second from the right) with Mr. Foughty (far left) inside the IAEA Environmental Laboratories (Monaco).

# IAEA Careers

## - trade shows & more -

The year is coming to a close and as we look back, IAEA Careers has had quite an eventful year. In the second half of 2014, representatives from the Section attended eight different conferences, annual meetings and career fairs throughout the U.S. The Section also organized webinars in collaboration with the IAEA. Additionally, the Section visited the USGS center in Wisconsin to present information about IAEA's work and about our Section's assistance to water resource experts.

One of the webinars organized by the Section was entitled, "Moving to and Living in Vienna" and was presented, in July, by club members of the Americans in International Organizations in Vienna. The webinar described first hand experiences and provided practical advice to people who might be in process of moving to Vienna for an IAEA position or who are considering employment at the IAEA but are concerned about moving to another country.

The Section also collaborated with the IAEA's Division of Human Resources on a webinar in October titled, "IAEA Pathways – Women at the IAEA," which brought together a group of five IAEA professional women from different Member States

and backgrounds. The round table panel touched on their personal path to the IAEA and experiences while working at the Agency.

Recruitment campaigns for several U.S. funded positions

were conducted by the Section in fields such as marine science, nuclear safety, and emergency preparedness and response. In addition, the Section alerted individuals and interagency counterparts of more than 100 IAEA vacancy notices in the second half of 2014.



**Pictured Above:** Steve Amundson representing IAEA Careers at a 2014 Tradeshow.

**Pictured on Right:** IAEA's Gustavo Araujo alongside IP Section's Natalie Wren at the ANS Winter Meeting EXPO.



## WHAT'S NEXT?

### IAEA Careers

The Section is already scheduled to attend four different events in the first half of 2015, including the American Physical Society's Annual Meeting in San Antonio, TX; the Waste Management Symposium in Phoenix, AZ; the American Nuclear Society Student Conference at Texas A&M University; the Nuclear Energy Assembly meeting in Washington, D.C.

The Section looks forward to its continued outreach activities and foresees a productive 2015.



# Fellows Across the U.S.

- a growing program -

During the second half of 2014, the IAEA Fellowship program hosted 37 fellowships and scientific visits. With the addition of 41 fellows currently in progress, there are 78 total fellows from the countries of Algeria, Bangladesh, Burkina Faso, Brazil, Belize, Croatia, China, Czech Republic, Egypt, Ghana, Guatemala, Indonesia, Israel, Jamaica, Jordan, Kenya, Kuwait, Malaysia, Mauritius, Mexico, Mongolia, Niger, Nigeria, Romania, South Africa, Thailand, Turkey, Uganda, Uruguay, Vietnam, and Zambia.

Trainings covered various fields such as, Nuclear and Radiation Safety and Nuclear Security, Nuclear Power, Nuclear and Atomic Physics, Radiation and Waste Safety, Radiation Processing, Safety Assessment, Plant Breeding and Genetics, Sustainability, Environmental Remediation, Research Reactors, Radiation Technologies, and Physics.

Host institutions included Argonne National Laboratory, Innovative Systems Software LLC, National Academy of Sciences, National Research Council, Oak Ridge National Laboratory, Massachusetts Institute of Technology, Missouri University of Science and Technology, Texas A&M University, University of California-Davis, University of Maryland, University of Tennessee, University of Texas at Austin, and the U.S. Nuclear Regulatory Commission.



Pictured Above: Fellow Tsevelmaa Sedkhuu (center)

Fellowships ranged from one week to three months in duration. Currently, there are 14 fellows training, four awaiting their start date next year, six in the process of being placed at various U.S. host locations, and 17 fellowship applications pending U.S. Government clearance.

In September, IP Program Manager, Dr. Sunaree Hamilton, travelled to Turin, Italy to attend and present the impact of the fellowship program in the U.S. at the “20th Meeting of Senior Fellowship Officers of the United Nations System Organizations and National Placement and Supervising Agencies.” This meeting has served as the main framework for interagency coordination on system-wide issues relating to the management of training and fellowships for more than three decades. The meeting also facilitates an in-depth exchange of views on substantive and administration aspects of fellowship programs and other training activities.



Pictured Above: Diane Zordan (left) will be leaving the IP Section this December after nearly five years. We wish Diane the best of luck! New team member, Stephanie Williamson (right), has begun to take over Zordan's role within the fellowship program. Williamson is a recent graduate of Trinity University (San Antonio, TX).

# IAEA-Argonne Training Courses

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- from radiotherapy to nuclear energy -



## 11-22 August 2014 **Interregional Training Course on Leadership and Management for Introducing and Expanding Nuclear Power Programmes**

Course Leader(s): Joe Braun  
IAEA Representative(s) Vincent Nkong-Njock, Jin Kwang Lee, & David Graves

We hosted 20 participants from Algeria, Bangladesh, Cameroon, Egypt, Indonesia, Kenya, Malaysia, Mexico, Nigeria, Poland, Thailand, Turkey, and Vietnam. The main objective of this training course was to help

decision makers and those responsible for developing and implementing a nuclear programme in emerging nuclear power Member States to obtain knowledge and develop the skills and abilities needed for success in this undertaking.

**Pictured Above:** During the first week of this course, participants took a tour of the Donald C. Cook Nuclear Station in Bridgman, MI .

## 25-29 August 2014 **Group Fellowship Training on Introduction to Physics and Administrative Aspects of Radiation Oncology for Administrative Staff**

Course Leader(s): Francisco Aguirre

We welcomed a small group of 12 participants from Argentina, Brazil, Costa Rica, Cambodia, Mongolia, Myanmar, Nepal, Panama, Uruguay, Venezuela, and Yemen.

The purpose of this group training was to provide administrative personnel with a basic understanding of the physics and administrative aspects of radiation oncology. Lectures introduced a variety of subjects in external beam radiotherapy and brachytherapy, such as basic radiation physics, radiation biology, treatment planning, dose delivery, site planning and radiotherapy equipment needs, quality assurance, and radiation safety. The attendees received lectures on related administrative issues such as personnel needs, professional and educational aspects of medical physics, radiation therapist activities, research funding, budgeting, and billing.

**Pictured Below:** During this one-week course, participants were able to visit Northwest Community Hospital in Arlington Heights, IL to learn more about their radiotherapy center .



**6-10 October 2014 Interregional Training Course on Legal and Financial Issues for a Decision in Countries Introducing or Expanding Nuclear Power**

Course Leader(s): Joe Braun, Paul Murphy  
IAEA Representative(s) Anjana Das, Paul Warren

17 participants arrived from Argentina, Azerbaijan, Bangladesh, Brazil, Jordan, Kazakhstan, Kenya, Lithuania, Niger, Poland, Thailand, Turkey, and Uganda.

The main objective of this training course was to support decision makers and those responsible for developing and implementing a nuclear programme in Member States. Training centered around improving the necessary knowledge and developing the skills and abilities needed for success in the introduction of nuclear power. The emphasis was on issues relating to the national position, legal aspects, and financing of nuclear power plants.

**6-17 October 2014 Training Course on the Theory and Practical Application of RESRAD BIOTA and Other Codes in the RESRAD Family for the Determination of Dose, Risk and Authorized Limits at Radioactively Contaminated Sites**

Course Leader(s): Charley Yu  
IAEA Representative(s): Marcelle Phaneuf

We received 20 participants from Armenia, Croatia, Georgia, Greece, Hungary, Lithuania, Moldova, Poland, Portugal, Russia, Slovenia, Slovak Republic, Serbia, Turkey, and Ukraine.

The purpose of the course was to provide practical training in the applicability and use of dose and risk models in the RESRAD Family of Codes for the assessment of contaminated sites. The course consisted of lectures on the principles of radioecology and risk assessment and on the RESRAD codes, as well as hands-on exercises for these codes.

**20-31 October 2014 Regional Group Fellowship on Selection, Acceptance, Commissioning and Maintenance of Equipment in Radiotherapy**

Course Leader(s): Francisco Aguirre

We welcomed 28 participants from Algeria, Argentina, Brazil, Chile, Ethiopia, Jordan Mauritius Mexico, Morocco, Nepal, Niger, Nigeria, Peru, South Africa, Thailand, Tunisia, United Republic of Tanzania, Zambia, and Zimbabwe.

The main objective of this training course was to provide participants with knowledge of selection, acceptance, commissioning and maintenance of radiotherapy dosimetry equipment and radiotherapy treatment units, such as linear accelerators and brachytherapy equipment. The expected output is that the participants will gain knowledge of selection, acceptance, commissioning, and maintenance of radiotherapy dosimetry equipment and radiotherapy treatment units, such as linear accelerators and brachytherapy equipment.



### 3-7 November 2014 **Refresher Regional Training Course for Radiation Therapy Technologists on 3D Radiotherapy**



Course Leader(s): Francisco Aguirre

33 participants were received from Argentina, Bolivia, Brazil, Chile, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Panama, Paraguay, Peru, Uruguay, and Venezuela.

The objective of this course was to provide training to technologists from countries that have no experience in the use of 3D conformal radiotherapy in order for them to implement this technique effectively and safely in clinical practice. This course also aims to improve the quality of radiotherapy in the region.

The course consisted of lectures and practical exercises. Students became familiar with the technical aspects that must be considered in planning the transition from 2D radiotherapy treatment planning to modern 3D. This course was fully communicated in Spanish.

**Pictured Above:** During this course, the participants visited the University of Chicago Hospital.

### 10-21 November 2014 **Interregional Training Course on Integrated Management Systems and Developing of the Safety Culture**

Course Leader(s): Joe Braun

IAEA Representative(s): Jana Roeschlova

We hosted 22 participants from Bangladesh, Indonesia, Lithuania, Malaysia, Mexico, Philippines Poland, Saudi Arabia, South Africa, Thailand, and Turkey.

The purpose of the training course was to help current or future owners/operators, regulators, suppliers, and other organizations connected to nuclear facilities establish management systems that meet IAEA requirements.

The course helped Member States embarking on, or expanding on, a nuclear energy programme with the development and implementation of management systems. Training incorporated international best practices as well as the topics of safety, quality management, and quality assurance in all the phases of developing a nuclear power plant, from feasibility studies, to siting, design, construction, commissioning, operation, and decommissioning.



**Pictured Above:** During this course, the participants especially enjoyed a Nuclear Safety exercise in which Argonne's Joe Braun played Deputy Prime Minister.

## 8-12 December **Regional Workshop on Fire Safety for Research Reactors**

Course Leader(s): Joe Braun

IAEA Representative(s): David Sears

A small group of 12 participants arrived from Bangladesh, Indonesia, Korea, Malaysia, Philippines, Thailand, and Vietnam.

The objective of this workshop was to provide the participating Member States practical knowledge and information on the IAEA safety standards and guidance on fire safety for research reactors as well as an opportunity for exchange of related information and experience. Topics included the development of a Fire Hazard Analysis Technique (FHA), a fire protection programme, and an analysis of internal fire events. This workshop was intended for personnel involved in research reactor design, operation, and regulation in the Member States of the Asian Nuclear Safety Network (ANSN).

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## SOCIAL ACTIVITIES

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- fun & more -



During each of these IAEA-Argonne training courses, there is room for some social activities for both the participants and the lecturers. Among the activities included are a welcoming dinner at a local restaurant and a shopping trip to downtown Chicago. It is with our pleasure that we have also been able to include some off-site visits during the course hours as well. Among these were the D.C. Nuclear Power Plant, Northwestern Hospital, & the University of Chicago.

**Pictured on Left:** Dee Dee Rudisel (left), Gina Orta (center), & Cheryl Bruzewski (right) are the IP Section's training course personnel.

***“ Do you know that for everyone in my field coming to Argonne for training is a dream come true? So I just wanted you to know that right now, my dream has come true. ”*** - IAEA/Argonne training course participant to Dee Dee Rudisel

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# WHAT'S NEXT?

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## Training Courses

In support of the climate change initiative, a new IAEA-Argonne training course is in development for 2015 on “Marine ecosystems and industry at risk: impact of multiple stressors.” The focus of ocean acidification for the training course is consistent with the State Department's current initiative on climate change, which highlights ocean acidification and impact to fisheries worldwide, amongst other topics.

Thus far, discussions have been based on developing the scope and objectives of the course. The preparation for this course at Argonne would involve the participation and assistance of the IAEA research scientists from Monaco. A main focus of the course is ocean acidification. Other topics to be covered in the training course would be provided as desktop exercises or by lectures from key scientists in the field from various organizations in the U.S. (e.g., Woods Hole, NOAA etc.) and abroad as appropriate.

The course will educate 20-24 participants through 40% lecture activity and 60% hands-on training (for three weeks). For infrastructure, we have identified specifications for a lab, equipment, materials, and samples needed (ie. mussels, sea water), as well as staffing needs (two lab persons from Monaco), and other administrative arrangements. It was concluded that the training course would include a hands-on training through an experiment that simulates ocean acidification impacts using Ca-45 isotope to determine CaCO<sub>4</sub> uptake on mussels using natural seawater, if available, or using artificial seawater, as necessary.

### Upcoming Training Courses (First Half of 2015)

**23-27 March 2015:** Accidents in Radiotherapy and the Role of Audit (for Radiation Oncology and Medical Physicists) (Asia)

**13-24 April 2015:** Advanced Training Course on Nuclear Facility Decommissioning and Environmental Remediation Skills

**4-15 May 2015:** Rapid Assessment Methods for Environmental Radioactivity

**4-15 May 2015:** Purchase, Acceptance and Commissioning of Radiotherapy (at MD Anderson, Houston, TX)

**1-12 June 2015:** International Seminar on the Essential Elements of Nuclear Security

**22 June – 2 July 2015:** Theory and Practical Application of RESRAD-BIOTA and the RESRAD Family of Codes for Determination of Dose, Risk and Authorized Limits at Radioactively Contaminated Sites



# IAEA Meeting Nominations

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- OFAC implications & more -

Over 350 meetings have been processed through the IP Section in the second half of 2014. By the end of 2014, our office will have processed about 800 IAEA meetings total. The IAEA meetings that our office processes for clearance are all non-safeguards related. They range from consultancy meetings, expert meetings, and technical meetings to working groups and international conferences/symposiums. Our program is routinely in communication with the U.S. Mission in Vienna, State Department, and the IAEA regarding the clearance process and status of these meetings. Most recently, our office has been involved in the drafting of many “special” cables for U.S. participation in IAEA events that involve countries that present Office of Foreign Assets Control (OFAC) issues. These cables take much more time and follow-up than our more routine cables. We have made a great effort to develop a new procedure to process these “special” cables so that they will become more easily processed in the future.

## IT Highlights

- Improved accessibility to computers for training course participants which allows more room for group work in the lab
- Training course lecturers can now share their computer screen with participants
- A new projector in the auditorium that creates a clearer image makes lecture notes much easier to read
- A bootstrap front-end framework is being added to the Meeting Nomination website to create some improvements for recordkeeping



**Pictured Above:** The Program's IT expert, Kun Kaewken, with an IAEA-Argonne training course lecturer, Hossam (Sam) Shalabi from the Canadian Nuclear Laboratories.

## IMPACT

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- the IP Section reports -

This summer, everyone who participated in our programs in the period 2004-2014 was contacted to collect success stories that will showcase the impact of the various IAEA activities that our office at Argonne facilitates. Participants were given the options of submitting short summaries or 30-60 second videos. The information is posted on interactive world maps on our website and will be presented, in the future, to the U.S. Department of State. The impact map for fellowship and training course participants can be viewed at: <http://international.anl.gov/FTCImpact.htm>.